continuously coupled to a corresponding plurality of electrode openings having diameters that are greater than gas feed hole diameters. The plurality of electrode openings are configured to define an electrode surface over the semiconductor wafer. The electrode surface increases the surface area of the plasma sheath adjacent to the electrode causing a shift in bias voltage onto the wafer surface, thereby increasing the ion bombardment energy of the wafer without increasing plasma density.

IN THE CLAIMS

Please replace the filed claims with the following. All pending claims after this Amendment are listed below in clean form for the convenience of the Examiner. Marked up claims showing the amendments are attached hereto. Claims amended by this Amendment are indicated as such. Please enter the following:

14. (Twice Amended) A method for making a top electrode for use in a chamber for processing a semiconductor wafer through plasma etching operations, the chamber including a support chuck for holding the semiconductor wafer and a pair of RF power sources; the method comprising:

forming the top electrode to have a center region, a first surface and a second surface, the first surface has an inlet that is configured to receive processing gases from a source that is external to the chamber and flow the processing gases into the center region, the second surface has a plurality of gas feed holes that lead to a plurality of electrode openings that have electrode opening diameters that are greater than gas feed hole diameters of the plurality of gas feed holes, the plurality of electrode openings are configured to define the second surface which is located over a wafer surface of the semiconductor wafer.

15. (Amended) The method for making a top electrode for use in the chamber as recited in claim 14, further comprising:

coupling the top electrode to one of the pair of RF power sources and the support chuck to the other one of the pair of RF power sources.

16. (Twice Amended) The method for making a top electrode for use in the chamber as recited in claim 15, further comprising:

forming the electrode openings to be at least about 0.5 mm or greater in diameter and the gas feed holes to have a diameter of about 0.1 mm.

17. (Amended) The method for making a top electrode for use in the chamber as recited in claim 15, further comprising:

defining the electrode openings to a depth of between about 1/32 inch and ¼ inch.

18. (Amended) The method for making a top electrode for use in the chamber as recited in claim 16, further comprising:

fixing a separation of between about 0.75 cm and about 4 cm between the electrode surface and the wafer surface.

19. (Amended) The method for making a top electrode for use in the chamber as recited in claim 18, further comprising:

inserting two or more gas buffer plates within the center region of the top electrode.

20. (Amended) The method for making a top electrode for use in the chamber as recited in claim 18, further comprising:

striking a plasma between the separation, the plasma having a first plasma sheath surface area that is proximate to the wafer surface and a second plasma sheath surface area that outlines an inner region of the top electrode openings, such that the second plasma sheath surface area is greater than the first plasma sheath surface area.

21. (Amended) The method for making a top electrode for use in the chamber as recited in claim 20, further comprising:

increasing an ion bombardment energy over the wafer surface when the second plasma sheath surface area is greater than the first plasma sheath surface area.